

INSTRUMENT FOR MEASURING ACCELERATIONS AND PROCESS OF MAKING THE SAME

AA

Patent number: US5065628
Publication date: 1991-11-19
Inventor: BENECKE WOLFGANG (DE)
Applicant: FRAUNHOFER GES FORSCHUNG (DE)
Classification:
 - international: B44C1/22; G01P15/08; H01L21/306
 - european: B81C1/00F2D4B; B81C5/00A; G01P15/00D; G01P15/08A; G01P15/12D; G01P15/125
Application number: US19900477964 19900604
Priority number(s): DE19873741036 19871203

AC = AA, AE

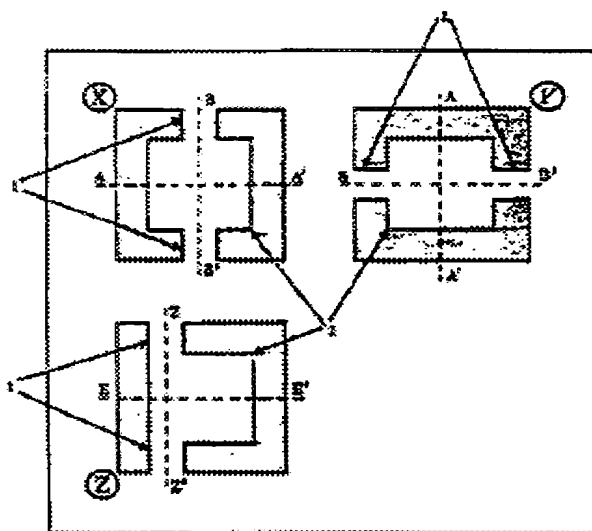
Also published as:

AD WO8905459 (A3)
 WO8905459 (A2)
 EP0394305 (A3)
 EP0394305 (A2)
 DE3741036 (A1)

more >>

Abstract of US5065628

PCT No. PCT/DE88/00740 Sec. 371 Date Jun. 4, 1990
 Sec. 102(e) Date Jun. 4, 1990 PCT Filed Dec. 1, 1988
 PCT Pub. No. WO89/05459 PCT Pub. Date Jun. 15, 1989. Disclosed is an instrument for measuring accelerations, with the aid of which changes in motion in the three axes of space can be measured with selective sensitivity. In order to detect multi-dimensional changes in motion, three micromechanical sensors, each sensitive to the acceleration in a selected direction, are integrated in a crystal. The sensors are composed of torsion bars having masses eccentrically attached thereto, which, in the event of changes in motion, exercise torques about the axes of the torsion bars. The torques are measured with the aid of integrated piezo-resistances. The planar integration of the acceleration meter permits integrating the evaluation circuit on the same semiconductor surface. Acceleration meters of this kind are fabricated with the prescribed process in planar technology with the aid of epitaxy, lithography and anisotropic etching methods. High precision and high miniaturization make this acceleration meter suited for application in overland and aviation navigation and for component positioning in robotics.



Data supplied from the esp@cenet database - Worldwide

USPS EXPRESS MAIL
 EV 511 024 267 US
 DECEMBER 09 2004